

# Notice of Allowability

Application No.

10/756,557

Examiner

Tri V. Nguyen

Applicant(s)

SMITH ET AL.

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/26/2006.
2. ☒ The allowed claim(s) is/are 1,4,7-9,12-14,16-30,32-45 and 47.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

7. ☒ THE DRAWING(S) FILED ON 01/13/2004 ARE ACCEPTED.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 05/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 09/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

*Lorna M. Douyon*

LORNA M. DOUYON  
PRIMARY EXAMINER

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant Representative Richard Jenkins on September 12, 2006.

2. The application has been amended as follows:

2.1 Claim 1, line 3, "the non-crosslinked" has been replaced with --a non-crosslinked --.

2.2 Claims 48-49, 51-54, 57-60, 62-70, 72-81, 83-86, 88, 90-159 have been cancelled without prejudice to their continued prosecution in a continuation application.

### **STATEMENT OF REASONS FOR ALLOWANCE**

3. The following is an examiner's statement of reasons for allowance: The claims in their present amended forms have overcome the prior art of record because none of them teaches, discloses or suggests a process of producing an ionic crosslinked fibrous material in the manner as those specifically recited, in particular the steps of reacting a fibrous material with a reactive anion of a haloacetic acid or an alkali metal haloalkyl sulfonate to form an anionic fibrous material and applying the polycation to the anionic fibrous material. In the art of filtration of liquids, Gillberg-Laforce et al., a newly found art, teach the feature of cationic or anionic groups on a modified fibrous material that is further coated with a polyelectrolyte such as chitosan

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having an opposite charge on the modified surface. In the art of textile dyeing, Cooper et al. teach the feature of coating the dyed textile with an anionic polymer followed by a second coating of a cationic polymer. Kim et al. teach the feature of treating cotton with a cationic chitosan. However, Gillberg-Laforce et al., Cooper et al. and Kim et al. fail to teach the use of a haloacetic acid or an alkali metal haloalkyl sulfonate to form an anionic fibrous material. Newly found art Kokko and Edwards, separately, disclose the use of chloroacetic acid to modify a surface; however, none of the prior art provides sufficient suggestion or motivation to combine the teachings of Kokko that is directed to the art of recycling sheets and Edwards to the art of laundry detergent with those of Gillberg et al., Kim et al. and Cooper et al. Accordingly, the claimed invention, as a whole, would not have been obvious to one of ordinary skill in the textile treatment art.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri V. Nguyen whose telephone number is (571) 272-6965. The examiner can normally be reached on M-F 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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**LORNAM. DOUYON**  
**PRIMARY EXAMINER**